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# Worldwide Report

ENVIRONMENTAL QUALITY

No. 362

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2 August 1982

WORLDWIDE REPORT  
ENVIRONMENTAL QUALITY

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WORLDWIDE AFFAIRS

INTERNATIONAL CONFERENCE IN STOCKHOLM STUDYING 'ACID RAIN'

Stockholm DAGENS NYHETER in Swedish 22 Jun 82 p 5

[Article by Bo B. Melander]

[Text] "For decades our air has been used as a garbage dump. Now we must pay for this nonchalant attitude," said Agriculture Minister Anders Dahlgren as he opened the Environment 82 conference on Monday in Stockholm, 10 years after the United Nations environmental conference in that city. Sweden also emphasized its concern over acidification in lime-deficient Scandinavia.

"Ten years ago all the evidence was available on the problem of acidification. We cannot wait 10 more years," he said.

A stop to air pollution, including acidification by sulfur compounds, would reduce lung cancer, acid soil, and lifeless lakes.

Reason for Stop

The agriculture minister told the international conference that the United States and Europe had produced over 100 research reports presenting scientific reasons for stopping sulfur and nitrogen emissions from the combustion of fossil fuels such as coal and oil.

He pointed to sensitive regions such as eastern North America and western Scandinavia.

Head of research at the Environmental Protection Board Goran Persson said it was too early to tell what damage the pollution does to humans, but he believed that reducing emissions would reduce various forms of lung disease, including lung cancer.

Sweden presented a report to the conference based not on reduced emissions, but on a continuation of the present level.

New Report

The following are new aspects described in research reports presented to the international symposium:

Mercury levels in fish are increasing. Cadmium is increasing in the liver of fish and game, and in grain where the soil contains insufficient lime.

The acidification also releases aluminum, mercury, and copper to the ground-water.

Researchers from many parts of the world are participating in the conference and Sweden's ambition, as it was when Sweden called for the conference in 1972, is to call special attention to how our country is affected by acidification.

Today thousands of lakes are more or less devoid of higher forms of life.

During the 1960's when Sweden established petrochemical plants, refineries, and oil-fired power plants in sensitive regions on the west coast, the debate over the acidification problem died down for various reasons.

#### At Home

Today West Germany and Great Britain, which release enormous quantities of sulfur over Sweden, have experienced the problem at home, as has Sweden.

West Germany is most understanding of the Swedish argument. Great Britain is cutting back on air protection research, which reduces the possibility that Great Britain will discover damage to humans, plants, and animals.

During the present so-called economic slump in Western Europe it is difficult to focus on concrete environmental catastrophes. Conferences easily become academic and rhetorical.

Sweden believes it has made significant strides toward limiting sulfur emissions within the country, but believes that international solutions are the only reasonable course, both economically and politically.

9336  
CSO: 5000/2128

'ALARMING' EROSION NOTED IN COASTAL AREAS

Dacca THE NEW NATION in English 16 Jun 82 p 5

[Editorial]

[Text] According to reports erosion of rivers has assumed alarming proportions in the coastal areas of the country, particularly in Kutubdia, Maheshkhali, Sandwip in Chittagong and in other areas of Noakhali, Barisal and Comilla. Although erosion constitutes a regular feature in this riverine country of ours and is somewhat natural in our topographical situation, bungling ineptitude and lack of timely action make no mean contribution to worsening of the situation in some cases.

The plight of Kutubdia is an instance in point. Erosion in the western part of this island began in 1960 due to the wrathful dashing of river Shankha against it. As much as taka nine crore has since been spent in the name of checking erosion of this island. But due to inept handling of this problem erosion has been steadily on the increase instead of showing signs of abatement. So far 21 square miles of this island of 45 square miles inhabited by several lakhs of people have gone under water and the Lighthouse built during the British rule has also vanished into the Bay. This year an allocation of Taka 25 lakh was made for construction of a 600 ft stone embankment along the western part of Kutubdia. But tenders floated twice or thrice evoked no response from contractors, presumably due to difficulties of carrying stones from the hilly regions upland at increased cost of carrying during the rainy season. But although the task may be difficult, we can not afford to idly look on. If response from contractors is not forthcoming, the authorities themselves should undertake this work on emergency basis and save this island from sinking in the Bay of Bengal.

Reports of similar erosion in Sandwip and other areas are also causing concern. All such places will have to be saved from the fury of swelling rivers. A well coordinated and multipronged assault on the problem will have to be launched with all available resources and through all available means like groynes, percupines, casting of boulders, earth bags and bolla piling depending on the efficacy of a particular method in a particular case.

The simultaneous formation of shoals at other places of the rivers and appearance of chars make the problem two dimensional. Constriction of flows at

some places makes the attack at other places furious. So, a long term solution of the problem will have to be sought in the framework of a comprehensive policy of water management. Elaborate studies in river morphology, keeping flows of rivers undisturbed through dredging of silted river-beds, loop-cutting, river training and construction of embankments along river banks should go alongside the immediate emergency measures against the menace of erosion threatening to devour valuable chunks of our land causing immense loss in terms of wealth and human suffering.

CSO: 5000/7072

BANGLADESH

BANGLADESH FOREST AREA SHRINKS BY 15 PERCENT

Dacca THE NEW NATION in English 17 Jun 82 pp 1, 8

[Text] Total forest area of Bangladesh shrank by at least 15 per cent due to encroachment during last 34 years. Large-scale felling of trees and uprooting of other vegetation have denuded tens of thousands of acres earmarked as forest area during the same period.

The Forest Department has not been able to recover even an acre of encroached forest land because of inordinate delay of the legal proceedings. The department has also failed to check the massive destruction of forest as the relevant law is not deterrent enough.

The total area under forest in 1947 was over 4,25 million acres with 101 sq. miles of it in Dacca, 282 sq. miles in Mymensingh, 950 sq. miles in Chittagong, over 1,000 sq. miles in Chittagong Hill Sracts, 195 sq. miles in Sylhet, 54 sq. miles in North Bengal, 2230 sq. miles in Khulna and five square miles in other districts.

Since then the forest area in the North Bengal has been encroached almost totally and vast areas of forest land in Dacca, Mymensingh, Tangail, Sylhet, Chittagong Hill Tracts went under illegal occupation.

An official of the Forest Department said it was not possible to say accurately the size of forest land that had been encroached as there was no survey of forest area. But it is firmly believed that forest area under encroachment will exceed 130,000 acres (roughly 15 per cent). He said only in Rikhyang reserved forest area in Chittagong Hill Tracts, 51,000 acres were encroached and over 10,000 cases relating to illegal occupation of forest land are now pending with different courts of the country. The cases are not being disposed of quickly due to complexity of legal proceedings and obsolete inefficient laws.

According to experts a country needs to have 25 per cent of its area under forest in order to have a desirable ecological and hydrological balance. But Bangladesh had only nine per cent of its land under forest (3.25 million acres based on records as received in 1947) even before the recent large scale plunder.

To raise the percentage of forest area, the Forest Department chalked out a number of programmes including planting in the coastal areas and the newly surfaced land in the Bay of Bengal, growing trees by the sides of railways and roads and highways, reforestation of the lost forest land after getting these back from illegal occupation. But the Forest Department could not proceed with the work of demarcating areas of reserved forest for reforestation purpose mainly due to lack of final notification from the authority.

CSO: 5000/7073

## SALINITY FATAL TO MAJOR SUNDARBANS PLANTS

Dacca THE BANGLADESH TIMES in English 20 Jun 82 pp 1, 12

[Article by Shamsul Huq Zabid]

[Text] With an alarming increase in salinity in the coastal belt of the country during dry months, the major plant species in the Sundarbans are on the wane.

Observations in sample plots in the Sundarbans during the months of May to November, 1981, showed that species like sundri, gava and keora were on the decline.

It was observed in most of the 12 sample plots in moderately saline, saline and fresh water zones that instead of regeneration, there had been a decline in the plant population of the major plant species. Besides investigation carried out in the Sundarbans showed the evidence of large-scale deterioration in the quality of timber plants.

### Salinity

The extent of salinity this year increased alarmingly in places about five times in the coastal belt.

There are six stations for reading soil salinity--four in the Sundarbans (Bo-gi, Chardapai, Kassiabad and Burigualini), one in Patuakhali (Tengragui) and one in Barisal (Kukri Mukri).

The following is the comparative salinity readings at three stations in the Sundarbans:

Place	March '81	March '82
Chardapal	600 micromhos	2500 micromhos
Kassiabad	3100 "	6000 "
Guriguali	3100 "	4500 "

Besides observations confirm that the mortality of rate of plants in the Sundarbans is on the increase in view of the increased Salinity Experts observed

that withdrawal of Ganges waters at Farakka had resulted in increase in salinity in the coastal areas. This increase in salinity, in turn, had greatly affected the ecosystem of the Sundarbans that had emerged through environmental succession.

#### Mortality Rate

During a study it was observed that the mortality rate was much higher in the younger age groups than in the older age groups because the young trees which have tender and undeveloped root and shoot system cannot tolerate unfavourable changes brought about by reduced flow in the Ganges.

Another study carried out a few years back estimated that total timber loss due to the death of sundri alone amounted to about 200 crore taka in 1976 prices.

Experts maintain that if the reduction of fresh water supply from upland continued, the entire Sundarbans was bound to turn into scrub forests and loss per acre during 20 years felling cycle would be 746 cubic feet of timber. The total loss after he felling cycle would rise to 362 million cft., worth Taka 3,600 crore.

At the present market rate, the Sundarbans has the potentialitics of supplying timbers worth Taka 60 crore per year. But with the deterioration of quality classes trees, the experts observed the ecosystem of the Sundarbans would be radically changed.

CSO: 5000/7074

## POLLUTION, OTHER DANGERS THREATEN PLANT LIFE

Bombay THE TIMES OF INDIA in English 15 Jun 82 p 6

[Text]

**N**EARLY 5,000 useful wild plants are sliding into extinction as a result of changes in the agricultural pattern and denudation of forests, says a study by the Birbal Sahni Institute of Paleo-botany (BEIP).

The botanist, Dr. Vishnu Mitra, who is also a senior assistant director of the institute, found during his study that indiscriminate use of weedicides and pesticides, as also variations in ecology due to changing agricultural pattern, were the two threatening factors.

Several wild plants had a natural relationship with the existence of other categories of plants and in case where forests were cleared in a big way, wild plants growing underneath along with large trees also ceased to exist, Dr. Mitra said in his study "Wild plants in Indian folk life — a historical perspective."

Dr. Mitra said that wild plants had been put by the tribals and poor men for hundreds of years to a variety of uses including food, fibre, medicines, oil, fuel, dyes and detergents etc.

While ever-increasing population and search for new sources for food resulted in organised scientific study for developing new varieties of grains and their cultivation in a scientific manner, no such thing was done in case of wild plants.

Therefore, while food production had been increasing gradually, wild plants, which could also be made use of in a similar manner, had been diminishing day by day, he added.

The scientist said at least 80 wild plant species were known of which roots, tubers and rhizomes were eaten in various parts of the country.

The giant "taros" and "yams" were eaten raw or cooked, bulb powder

was used with flour while some parts of plants were also used as condiments or were added as flavour.

Similarly there were nearly 250 wild plant species comprising herbs, shrubs and trees of which leaves and shoots were gathered and eaten raw or cooked.

However, the list was not complete and the number of wild plants used for other various purposes was several thousand, Dr. Mitra said.

The paper mentions nearly 40 uses of wild plants and says the utility of all wild plants for various purposes was not recognised in one day. Rather it was a result of progressive human culture.

The wild plants used to meet almost all kinds of requirements have enormous germ plasm in them which could be profitably employed to improve modern cultivation and some wild plants could be adopted as future food, fibre and oil plants to meet the increasing demands.

## SYSTEMATIC STUDY

This, however, needed a systematic study and preservation of these plants and also a thorough survey of all tribal areas in the country to gather the necessary information about them, the scientist suggested.

The study said that some wild plants are nutritively richer than all other known major cereals, "moix akhara johi" being an example among the many.

The plant, which was systematically cultivated by the tribals of Assam, could be improved upon suitably and adapted on a large scale, it added.

If only a part of the planned expenditure on the development of new varieties of grains was diverted to the development of wild plants, their large-scale adaptability would help the country tremendously in the economic sense also, Dr. Mitra added.

CSO: 5000/7067

INDIA

INSTITUTE REPORTS EFFECTS OF OIL POLLUTION ON SEAS

New Delhi PATRIOT in English 17 Jun 82 p 5

[Text]

PANAJI, June 16 (UNI)—Over four million tonnes of oil gets dissolved in the Arabian Sea every year leading to pollution and causing extensive damages to the sea animals, according to a study conducted by the National Institute of Oceanography (NIO), Goa.

The pollution is due to the spilling of oil by the tankers carrying crude oils to different destinations.

According to the NIO study based on the information collected from various agencies in the world, the total oil transmitted through sea in 1981 was estimated at over 1400 million tonnes.

The NIO experts told a group of visiting newsmen from New Delhi that the instant damages caused by such pollution was "too much".

The study also reveals that the extent of such pollution of Bay of Bengal waters is less as only 400,000 tonnes of oil is spilled into the sea.

Besides oil, leakage of tar also causes pollution and extensive damages to the sea. Ac-

cording to one estimate, 750 tonnes to 1000 tonnes of tar gets discharged into the sea waters.

Meanwhile, the indigenous research vessel "R. V. Gaveshani" will shortly undertake a study on the behaviour of mea-  
son and extent of pollution in the coastal areas of Madras.

The study will also cover Krishna, Mahanadi, Godavari and Ganga basins.

DATE WITH BHASKARA

Bhaskara II, India's experimental satellite keeps a date quite often with the Gaveshani.

This rendezvous though not directly has helped scientists at NIO in confirming some of the base line data of the oceans, scientifically called sea-truth data.

The Bhaskara and Gaveshani had three meetings this month 4, 7, and 8 June.

Scientists in the ship follow the movements of Bhaskara and cruise to a point in the ocean when it passes the spot, 300-500 km from the coast. The satellite releases various data which is immediately confirmed by scientists using various instruments.

CSO: 5000/7070

## SCIENCE WRITER SCORES DRAFT FORESTRY BILL

Calcutta THE STATESMAN in English 16 Jun 82 p 8

[Article by Kalpana Sharma]

[Text]

**T**HE sentiments expressed by the Prime Minister on April 30, at the first national environment conference for legislators, could not be faulted since Mrs Gandhi spoke of the need to give precedence to prudence over greed in the use of the country's natural resources, and claimed that true development was not incompatible with conservation. Yet the Government's attitude towards forests is far removed from these ideals.

Although some biosphere reserves are being created, there are many more areas where irreplaceable genetic wealth is being destroyed as large natural forests are clear-felled either for planting economically important species of trees, or for "developmental" activities. The greed of the timber industry predominates; prudence or any far-sighted thinking about the environment, is rare. Development and conservation, therefore, appear incompatible.

**RESOURCE**

Controversy was triggered off by a draft Bill to update the existing Indian Forest Act, enacted in 1927. Prepared in 1978 by the Central Board of Forestry, following recommendations of the National Commission on Agriculture, the document was finalized in August, 1980. It is possible that by the time the Bill is presented to Parliament, it will be partly or highly modified; but that a new measure is imminent is not in doubt.

Forests are a limited and depleting resource in India. An estimated 743,584 sq. km., or about 22 per cent of the country's total area, are supposed to be covered. Satellite pictures,

however, show that much of this is degraded forest or shrub land, and that actual tree cover is far less. The rate of denudation has been rapid over the last 30 years, during which 4.5 million hectares of forests have disappeared, according to the Centre's own admission.

The first law on forests was enacted in 1865, the Government Forest Act empowering the authorities to declare any area a government forest. But there were some restrictions for the Government could not abridge the existing "rights of communities". In other words, if the forest had been the home of tribals, they could remain there and continue to live off forest produce as before. But under the 1878 Indian Forest Act, forests were divided into three categories—reserved forests, which were virtually government forests and where the Government could settle, transfer or commute the rights of communities; protected forests where the rights of communities were recorded and regulated but the Government could not commute them; and village forests where there was no official control over public rights.

Four amendments later, this measure became the Indian Forest Act of 1927 which is still in operation. The new legislation gave the Government the right to charge a levy on timber and forest produce in government and other forests. The list of offences was increased, and punishment was six months' imprisonment or Rs 500 fine. The Act also modified the phrase "rights of communities" to "rights and privileges of persons", thus further reducing the

access traditionally enjoyed by forest-dwellers.

New Delhi articulated a new forest policy in 1952. But this was only a modified version of the British policy statement of 1894. Six permanent needs were outlined: balanced and complementary land use; minimum deterioration and maximum production; checking floods and soil erosion; afforestation; requirements of defence, communications and industry; and generating the maximum annual revenue from forests.

Over the years, the last point has become the dominant theme. The gross revenue went up from Rs 24 crores in 1951 to Rs 473 crores in 1980-81, yielding a surplus of Rs 153 crores, 11 times more than the 1950-51 surplus.

This approach has also exacerbated the alienation of forest dwellers. Tribal customs and religion are interwoven with the forest. In the belt stretching from West Bengal, through Orissa and Bihar to Madhya Pradesh and Maharashtra, adivasis live off the forest, graze their cattle in it, fish in its lakes and river, hunt for small game, and cultivate in clearings. To block off areas from these people, without giving them any alternative means of livelihood, leaves them with just two options: either to illegally and forcibly occupy forest land, or become forest labourers earning a pittance from cutting the very trees that provided them with their basic essentials.

Adivasis have begun in recent years to organize themselves, occupying forest land and cultivating it. By their actions they have become unwitting scapegoats in the Government's ploy to increase bureaucratic control. Constantly complaining that tribals illegally cut down trees for firewood or destroy forests through illegal cultivation, officials demand additional powers to check such encroachment.

### PREVENTION

The objectives of the proposed legislation, therefore, predictably include the prevention of using forest land for agricultural purposes and regulating customary rights such as grazing. There is also a move to reclaim traditional burial grounds which are often located in the middle of reserved forests. The Bill's other objectives are prevention of large-scale deforestation, stopping private contractors and maximizing revenue.

The draft legislation increases

the list of offences to include "gathering forest produce" which it defines in detail: the list of 38 forest products covers grass, flowers, leaves and branches. Under the Bill's 15 chapters and 143 sections, "any land whatsoever...which the State Government declares to be a forest", becomes a reserved forest. Forest settlement officers will have the powers of a civil court to settle disputes, while forest officers will be able to arrest people without warrant and punish them for any of the listed offences. Gathering forest produce, for instance, can entail three years' imprisonment or a fine up to Rs 5,000 or both. Punishment can be doubled if the crime is committed "after sunset or before sunrise".

The main stated aim is to check large-scale deforestation. But are tribals the real culprits? Why should they destroy their own land? Tribal customs reveal their deep respect for nature and all its creatures. Yet the Bill is designed to check tribal access to forests. Meanwhile, the main reasons for deforestation are evaded. The Government's policy of viewing forests as primarily an industrial and financial resource, instead of giving high enough priority either to ecological factors or to the needs of the people who are dependent on forests, is largely to blame for wanton destruction.

The Fourth and Fifth Five Year Plans made the maximum utilization of forests for industrial purposes their declared policy. States with abundant forests witnessed the unchecked growth of industries such as pulp, paper and plywood. Many of these industries were clearly over-capitalized. Reserved forests became factories churning out the bulk of the raw material, often at highly subsidized rates. For instance, the forest department supplies cheap timber for packing crates to private companies in both Himachal Pradesh and Assam to subsidize the apple and tea industry respectively. The department clear-felled natural forests, replanting them with what is termed "industrially useful varieties", to meet this demand. Little care was taken to see whether the area cleared had any precious or rare flora that needed to be preserved, or whether the trees cut had a special meaning for adivasis.

### PRINCIPLE

Forest officials justify these operations by saying that they

follow a working plan which is drawn up every 10 years—the last was formulated in 1975—and according to which, only the increment of the forests is cut without touching the capital. This is a laudable policy in principle, but in fact, the increment and a good part of the capital has been denuded. Officials who claim to be helpless to check illegal felling are often part of a corrupt chain that begins at the top and goes all the way to the poorly paid forest guard. The forest department is supposed to mark specific trees to be cut when it auctions a coupe; more often than not, five times the number of marked trees are cut. Money passes hands at checkpoints, and the illegally felled timber is removed.

The department's solution is to eliminate private contractors and either make all felling operations departmental, or to set up a corporation as in Madhya Pradesh. But this will only nationalize corruption. Contractors will work for the Government instead of for private merchants. Dams, roads and railway lines also take toll of our forest wealth. Many of these constructions are not preceded by a study of the impact on environment. According to FAO's survey of Asian forests, 3.4 million hectares were destroyed in India through these activities between 1951 and 1972. The report esti-

mates that the country loses 0.15 million hectares every year.

Another reason for deforestation is jhoom or shifting cultivation which followed a 20 year cycle when land was plentiful (and there were fewer people), affording enough time for regeneration. Now the cycle has been reduced to only four or five years, the land being eroded to a point where it cannot support any vegetation. At the same time, the vital need for firewood is ignored. This is evident from Sixth Plan allocations of Rs 356 crores for commercial forestry, against only Rs 57 crores for fuelwood plantations. The FAO predicts that India will face a shortfall of 182 million cubic metres of firewood by 2001 A.D. even if all the planned fuelwood plantations take place.

According to the Sixth Plan, 80 per cent of India's total energy consumption is through fuelwood. Our forests meet only seven to 10 per cent of the 133 million tons presently consumed, the rest being obtained from trees in urban areas, along bunds, around houses, as well as, stolen from reserved forests. Those caught in the act of stealing firewood will severely be punished in accordance with the provisions of the draft Bill, while the real plunderers—the contractors working for timber-based industries, will continue to get away because of political patronage.

CSO: 5000/7068

PAPER DESCRIBES EFFECTS OF FOREST DENUDATION

New Delhi PATRIOT in English 16 Jun 82 p 5

[Text]

**NEARLY 5,000 million tonnes of top soils are lost every year through erosion caused by massive deforestation in the country over the last three decades, reports UNI.**

In a paper 'level of deforestation in India: impact on environment' Mr V N Vashist and Mr P R Bose of the National Institute of Science, Delhi have said that per capita forest area in India has fallen to a meagre 0.13 hectares as against the world average of 1.08 hectares.

From 1951 to 1961 alone, 18,30,550 hectares of forests were lost to projects connected with extension of cultivation, irrigation and power development and rehabilitation of refugees.

The paper says statewide, Tripura enjoys the first position in forestry having 37.5 per cent of its total geographical area under forest while Haryana lowest position with forest accounting for only 3.3 per cent of its total area.

A rainfall analysis of the last three decades, according to the paper shows that Assam's rainfall decreased by 3.2 per cent due to deforestation.

It says the 'Red book' released by the World Wild Life Organisation indicated that Indian animal species like deer, hangul,

snow-leopard, pasham goat mark-hoor, partridges, chakor, python and cobras will be lost permanently if not protected properly.

The quantity of carbon dioxide in the earth's atmosphere is increasing steadily at the rate of about 0.2 per cent per annum.

The paper says that 5,000,000 hectares of forest area in Asia are lost every year. In Africa the loss is about 2,000,000 hectares per year.

Deploring the lack of concern for environment in various countries, it says even in developed countries, the expenditure on environmental programmes ranges only between one and two per cent of their respective GNP though the economic cost of pollution damage varies between three to five per cent.

Quoting a Nairobi-based consultant on environment and development, Dr Myer, the paper says the desertation is advancing at the rate of 100,000 sq. kms each year at the world level thus affecting 50 million people annually.

CSO: 5000/7069

INDIA

BRIEFS

KERALA EROSION FIGHT--COCHIN, June 17 (PTI)--The Centre has sanctioned a loan of Rs. five crores for construction of new protective walls against sea erosion in Kerala. The state has a coastal line of 560 kms and of these, 320 kms is prone to erosion of the sea. Protective walls, old or new, exist for a total length of 270 kms. The construction of one km of wall, which is 18 metres wide and 3.3 metres high, costs about Rs. 40 lakhs. Mr. S. Babington, chief engineer, Central water commission and chairman of a committee appointed by the Centre to study sea erosion in Kerala inspected the current works in progress and the condition of existing sea walls which needed urgent maintenance. A state government official who accompanied Mr. Babington on his tour said today that the severity of sea erosion had not yet been felt so far this year. [Text] [Bombay THE TIMES OF INDIA in English 18 Jun 82 p 5]

CSO: 5000/7071

## FACTORIES PROSECUTED FOR VIOLATING POLLUTION LAW

Kuala Lumpur BUSINESS TIMES in English 2 Jun 82 p 5

[Text]

FIFTY-FIVE factories have been prosecuted for discharging industrial effluents under a pollution law which came into force last year.

They are among 4,000 factories which are required under the environment quality regulations to install a treatment system for sewage and industrial effluents.

According to Director of Water Pollution Control, Mr A. Maheswaran, nine out of 10 factories concerned had fitted the system.

Those without the system had been issued temporary licences to operate without it, he said yesterday, but added that he was confident all the factories would have the

system by the end of the year.

Mr Maheswaran said that his division of the Science, Technology and Environment Ministry has six regional offices for inspection purposes.

The offices are in Butterworth, Kuantan, Kuala Lumpur, Johore Baru, Kota Kinabalu and Kuching.

■ MALAYSIA will celebrate World Environmental Day on Saturday by holding various programmes aimed at increasing public awareness of the importance of protecting the environment.

The Administrative Director of the Environmental Division, Encik Ghazali Mohamad Noor,

said yesterday that this year's theme for the celebration, *New Era in Environmental Administration*, was suitable in view of the government's emphasis on the growth of heavy industries.

He told a news conference that one of the programmes was a three-week exhibition and film show at the National Museum on the effects of pollution and various control measures undertaken by the government.

The exhibition will be opened by the Minister, Datuk Amar Stephen Tong.

Other programmes include the opening of a pedestrian mall along Ja-

lan Raja by the Acting Datuk Bandar, Dr Elias Omar, free admission to Zoo Negara for children under 12 years and an art competition for primary school children at the zoo.

Meanwhile, government libraries will display books and periodicals on the subject for the public.

Television Malaysia will have special talk shows on the importance of the environment while Radio Malaysia will broadcast the Minister's speech on Friday.

The various states in the country had also drawn up their own programmes to celebrate World Environmental Day. — Bernama

CSO: 5000/8011

ENVIRONMENTAL PROBLEMS OF DEVELOPING COUNTRIES DISCUSSED

Islamabad THE MUSLIM in English 6 Jun 82 p 4

[Article by Shahid-Ur-Rehman]

[Text]

**The 10th World Environment Day is being observed today by member States in commemoration of the first UN Conference on the Human Environment held in Stockholm from June 5 to 11, 1972. The main purpose of the observance is to highlight the global interdependence of in the care & use of earth's resources.**

A decade after the UN conference on environment in Stockholm, as if stirring out of deep sleep, the developing countries are taking steps to make development pollution free. Environments are not considered any more as a business of the rich countries alone, though the problems in LDC's remain essentially, the "pollution of poverty" resulting from lack of development rather experienced from excessive development as is the case in the rich North.

Giant chemical complexes, nukes emitting radiation, vehicles spitting out vapours on the pedestrians and habitats spoiling the face of mother nature are a few top concerns of the environmentalists, friends of the earth and environmental planners in the developed countries. On the other hand, resource deterioration by deforestation and desertification,

equally housing and inadequate sanitation are degrading the quality of human life in the already wretched South.

There are two faces of environments in the world. The ugly and the beautiful or the springy face and the wintry face. One is the concern of the people at the top and the second relates to the people at the bottom or in the pit of vicious poverty.

The Western countries are pouring billions of dollars to keep the beauty of nature and the purity of their countryside. It is a holy crusade to keep the cleanliness and purity of air, water and soil. Silvery lakes must not lose their glitter by the dumping of hazardous materials and emissions of motor-boats. Wilderness must stay wild while no habitats be allowed to steal its magical spell. No more development or zero growth is what the environmentalists are advocating in the Western countries, a goal that merits support from all quarters and all corners of the world.

In a country like Nepal, on the other hand, the local population have stripped the mountains, in search of wood for fuel, of all the trees and shrubs. Women and children have to travel far and wide for a pack of wood at places, where once forests abounded. In Chad, Malawi, Haiti, Laos, Bangladesh and over 30 other developing countries, classified as the poorest of the poor countries, sometimes described as "basket cases" and sometimes "pits without bottom," the newly-born and grown-ups are engaged in an agonised battle and scramble for food whose availability is diminishing with each sunset and sunrise. "Desert is creeping on us," is the cry that is echoing in all drought-stricken and drought-prone African cities.

In Pakistan waterlogging, salinity and de-forestation are some problems which not only have environmental implications but have also retarded the efforts to boost agricultural production. The Government has also been burdened with a massive expenditure to fight the twin menace, which are eating away the vitals of the most fertile lands in the country. At the same time, sewerage, sanitation and drinking water availability have emerged as the biggest hurdles for a decent life in the urban as well as rural areas. Thousands and millions of people are forced to live in squatter settlements or Kutchi Abadis, deprived of civic amenities amidst rivulets and ponds of unhygienic stinking water.

Some specialised agencies of the United Nations have not only played a key role in identifying these problems but are also lending shoulder to fight them. As for example, UNICEF has undertaken a number of pilot projects for popularising dry latrines in countryside. The mere fact that three-fourth of Pakistan's population lives in over 40,000 villages without any adequate sewerage and sanitation system suffices to highlight the immense harm that is being done to our environment by a facility that goes without saying for liveable human environment.

Based on the achievements of these pilot projects, a national development plan would be chalked out for making the countryside free and safe from the pollution and diseases springing from human waste.

The World Bank has also helped Pakistan in launching a number of projects relating to development of sewerage and sanitation schemes in cities like Hyderabad, Lahore, Rawalpindi and Khaipur Removal of Kutchi Abadis by giving their residents alternative plots is also being planned in old Lahore and Karachi Baldiya area.

Squatter settlements or Kutchi Abadis are spread over an area of 14,800 acres in Sind and it is estimated that 2.2 million people (16 per cent. of the total population and 33 per cent. of Karachi's population) live in these habitats.

As developing countries march on the development highway, they are prone to experiences of pollution stemming out of growth problems. An instance that is peculiar to Pakistan is waterlogging and salinity. Having the biggest earth-filled dam in the world and world's largest irrigation network, sub-soil water level has risen in many areas, infiltrating salt and alkaline water to the top of the soil. Thus, while a reservoir of water has become available, the same phenomenon has robbed the fertile lands their power to

produce grains, outweighing in many places the benefits of irrigated farming.

These well-meant efforts are bound to suffice again and again in Pakistan or countries with similar conditions, unless measures are taken to prevent their recurrence. Pakistan has launched a 1.2 billion dollars canal rehabilitation project which seeks to strengthen canal beds and walls against seepage and loss of water. It also aims at introducing tile drains, precision land levelling, reclamation of lost alkaline and saline land as well as monitoring drain flows. WAPDA is in the midst of implementing many SCAPP projects of the same nature.

Other aspects of environment planning which are peculiar to metropolitan cities alone, are also being taken care of. As for example, a Karachi environment protection agency is working since June 1980 under KDA to keep an eye on the environment problems of Karachi city. So far it has prepared reports on subjects like waste water disposal and cycling, marine and air pollution, garbage disposal and feasibility study of setting up an Institute of Environment studies in Karachi.

An allocation of one million rupees was made in the KDA budget this year for an action plan for Karachi's environmental protection of Karachi. The plan is being prepared with the help of Karachi University.

CSO: 5000/5777

EFFORTS TO KEEP ENVIRONMENT CLEAN REVIEWED

Karachi MORNING NEWS in English 5 Jun 82 p 4

[Text]

THE World Environmental Day was celebrated throughout the world by the international community on June 5th. The objective of the day was to heighten public awareness of the significance of the environment and the implications of environmental change. A decade ago, the United Nations Conference on the Human Environment, held in Stockholm, adopted a Plan of Action aimed at increasing knowledge of the environment and the protection and improvement of its quality. Over the past ten years, the dissemination of information pertaining to the human environment has been instrumental in altering our perception of the world around us and has created a consciousness of the dangers posed to it by human activity. The ecological equilibrium maintained by nature over countless centuries is today threatened. Any major alteration in this equilibrium could well pose a major problem for the survival of mankind itself. That the international community has realised the importance of protecting and preserving the environment can be gauged by the fact that since the Stockholm Conference more than one hundred countries, including Pakistan, have created separate Ministries or Departments to deal with this subject.

The major environmental problems faced by the world today include pollution of the atmosphere and oceans, deforestation, desertification, endangerment of the flora and fauna, hazardous disposal of waste, especially nuclear waste, food and drinking water contamination and soil erosion. To tackle these, the United Nations Environment Programme was established by the U.N. General Assembly consequent upon the holding of the Stockholm Conference in 1972. The Programme, headquartered at Nairobi and governed by a Council (on which Pakistan has served twice) was entrusted with the task of monitoring the progress achieved in implementing the recommendations and Plan of Action of the Stockholm Conference. At UNEP's initiative, the Global Environmental Monitoring System (GEMS) was established for monitoring the presence of pollutants in the atmosphere and the oceans. This surveillance has resulted in the reduction and regulation of discharge of poisonous pollutants into the world's oceans and atmosphere. Various governments and international agencies have also adopted anti-pollution measures for minimising chemical and physical hazards to human health, including strict standards to control contamination of food and drinking water. UNEP has also implemented, in collaboration with

UNESCO, a network of field projects under the Man and Biosphere Programme (MAB) to improve the scientific basis for environmental management. More than 200 biosphere reserves have been established in 55 countries to work on, among other things, the conservation of flora and fauna and the preservation of forests. However, progress in other major areas has been limited due partly to limited financial resources at the disposal of the Programme (the funds are pledged voluntarily) as well as the broad and vague recommendations of the Plan of Action of the Stockholm Conference in fields such as desertification, oil spills, 'acid rain' (fallout from power stations and factories) DDT use of chemical and biological weapons and the fallout from nuclear tests in the atmosphere progress has been minimal.

In Pakistan, the major environmental problems relate to contaminated food and drinking water, sub-standard housing (slums), deforestation, desertification, soil erosion and the pollution of atmosphere and water resources in industrial areas. The Government has taken a number of measures to reduce and eventually eliminate these problems through the enactment of national environmental legislation, environmental education, the establishment of strict standards against industrial pollution and a major programme for reforestation to combat the threat of soil erosion and spreading desertification.

It must be recognised however, that these are merely palliative measures. The basic environmental problems that Pakistan shares with other developing countries of the Third World spring from under-development, ignorance, disease, poverty, population explosion and malnutrition. The emphasis of UNEP has so far been to concentrate on the environmental problems of technologically advanced countries, which are a result of a totally different set of conditions and circumstances. The greater awareness in the developed countries of the need to protect their environment can generate the necessary resources within those countries to fight environmental problems, whereas in the developing world there is a scarcity of resources which can be diverted towards combating these problems. An international agency like UNEP must, therefore, re-orient its policies and concentrate on providing assistance to the developing countries for overcoming the primary causes of environmental pollution.

CSO: 5000/5777

PHILIPPINES

BRIEFS

ADVERSE IMPACT OF DEFORESTATION--The Ministry of Energy will spend P30 million to develop and preserve watershed areas throughout the country. Our irrigation dams are drying up. Hydroelectric plants are not producing the expected volume of electricity. All these can be traced to illegal loggers and even licensed loggers who probably did not earn P30 million in their destruction activities. What we have done was comparable to firemen who allowed fires to destroy buildings before campaigning against fires. We do it the expensive way. [Teodoro F. Valencia] [Text] [Manila PHILIPPINES DAILY EXPRESS in English 4 Jul 82 p 4]

CSO: 5000/5776

## TINCOMALEE HARBOR POLLUTION THREATENS MAN AND FISH

Colombo THE ISLAND in English 30 Jun 82 p 2

[Article by V. Varathasuntharam]

**[Text]** Pollution of the Trincomalee inner harbour by the discharge of Oil and waste by vessels has become a threat to the health of the people and the lives of the fish.

The utter disregard with which waste and oil have been discharged by vessels could be seen along the shore from the jetty towards the Crows Island. Following representation made by the members of the public, Trincomalee Additional Government Agent, Mr. N. Pathmanathan has directed the customs to stop this pollution forthwith as it was a serious matter.

It is customary for vessels that call at harbours to discharge wastes in mid sea or deposit them in dumping grounds on land.

Recently the Indian vessel Amba that called at Trinco harbour transported its waste by launch under the supervision of the customs and deposited it in the town dumping ground.

Contrary to this healthy practice, it had been alleged that three vessels — Eastern Success, Eastern Alliance and Al Taslim could have discharged oil and caused the pollution. But all three vessels have denied the allegation. In the meantime samples of refuse were sent to Colombo analyst. The chemist if the Petroleum

Corporation has informed that the samples sent to him appear to be of diesel oil and furance oil as indicated by their colour.

One of these vessels, Eastern Alliance carried out cleaning operation in the area concerned. Harbour Master stationed in Colombo has been informed by his deputy in Trincomalee that he had inspected the area and found that the cleaning operation was satisfactory.

All shipping agents operating in this harbour and the captains of the ships have been instructed by the authorities to strickly comply with laid down procedures in the discharge of waste. An appeal has also been made to them to co-operate in keeping the harbour free from pollution. They have also been warned that any vessel found to be polluting the area would be sent out of the harbour.

CSO: 5000/5775

**INTER-AMERICAN AFFAIRS**

**NICARAGUA, MEXICO SIGN ENVIRONMENT AGREEMENT**

**PA011610 Managua Domestic Service in Spanish 0300 GMT 1 Jul 82**

[Text] Mexico and Nicaragua have signed a bilateral environmental cooperation agreement. The document was signed by Manuel Lopez Portillo, deputy secretary of the Environmental Improvement Department of Mexico, and by Companeros Jorge Jenkins and Samuel Santos, director of the Nicaraguan Natural Resources and Environment Institute, IRENA, and minister of the Nicaraguan Government Junta, respectively.

Based on this document, the Mexican Government will provide Nicaragua with information of environmental legislation, and on technology for producing potable water, on sanitary food processing and on emergency disaster plans. The agreement also includes training programs in Mexico for Nicaraguans. The training programs will be in the fields of sanitary engineering, environmental protection and the processing of water. Nicaragua will also receive technical assistance for research on the Lake Managua basin and for the solution of its problems.

**CSO: 5000/2137**

EL SALVADOR

BRIEFS

CABANAS REFORESTATION--Cabanas departmental authorities have proposed reforestation for the near future on an area of approximately 1,800 manzanas. On 1 July, in various regions of the department, especially Ilobasco, a series of ceremonies were held to commemorate Reforestation Day. In a symbolic fashion, Ilobasco peasants planted trees on "El Roble" land which has been made available as a loan of commodatum by the owner, the Ministry of Agriculture and Stockraising, for the purpose of conducting many kinds of experimental programs, such as fisheries, fowl raising and forestry. At the same time, students of the Sor Henriquez school in Ilobasco planted trees along the road between Ilobasco and the Pan American Highway. These activities were coordinated by technicians of Region 3, Center (Cabanas) for outlying regions under the direction of agronomist Luis Alberto Landaverde, head of the Ilobasco Agricultural Extension, with the assistance of DIDEKO, the Ministry of Education, Public Works and the military authorities. In this outlying department various activities are being developed with the goal of making Cabanas a progressive district. Besides the reforestation plan there are other wide-ranging projects being worked on enthusiastically or being planned in a broad program of communal development in the department under financing from the National Unity Government and the Central American Bank of Economic Integration (BCIE). [Text] San Salvador EL MUNDO in Spanish 9 Jun 82 p 147 11989

CSO: 5000/2130

GUADELOUPE

NATIONAL FOREST DEVELOPMENT PROJECT DESCRIBED

Pointe-a-Pitre FRANCE-ANTILLES in French 2 Jun 82 pp 1, 12

[Interview with Pierre de Montaignac, regional director of the National Forestry Office, by Bernard Salom; date and place not specified]

[Excerpt] Pierre de Montaignac, regional director of the National Forestry Office, will soon leave Guadeloupe. He arrived here 9 years ago, meaning that he has had time to become known and appreciated and, above all, to accomplish a great deal of work here. He was one of those chiefly responsible for the renewal of Guadeloupe's forest and the Guadeloupe National Park. Major projects have been undertaken during his time here, both to protect and to replant the forest, and the result of all that is that there has been a revival of woodworking crafts in Guadeloupe. It is true that the industry in question is still in its beginning stages, but it points to lightning-fast development in the future.

Guadeloupians will therefore be sorry to see de Montaignac go. A chief forestry engineer, he is a native of Auvergne (with roots, he is quick to point out, in Perigord). Before being assigned to Guadeloupe, he served in Lozere and then in Herault. Pierre de Montaignac is a Chevalier of Agricultural Merit and a Chevalier of the National Order of Merit (January 1980). FRANCE-ANTILLES is also sorry to see him leave Guadeloupe: throughout his stay among us, we have always had excellent relations with him and his department. We wish him and his family an excellent and profitable stay in Reunion, where he is to take up his new duties this coming 28 July. But before leaving, Mr de Montaignac agreed to talk to us.

FRANCE-ANTILLES: Mr Director, you will be leaving Guadeloupe very soon. How long have you been here, and where are you going?

De Montaignac: We will leave Guadeloupe on 6 July and make a brief stopover in Europe before going on to Reunion, where I have the good luck to be taking

over from a man of very high caliber who has been there for about 30 years. Everyone tells me that Reunion is a fascinating island because it has a most interesting national forest--nearly three times as large as the one here in Guadeloupe. My wife and I have lived in Guadeloupe for nearly 9 years, since I came here 4 years before being named chief engineer to be the acting regional director, and it was possible for me to be appointed regional director while here. I have had the privilege of engaging in quite diversified activities here, since the ONF [National Forestry Office] is responsible not only for managing the forest but also for handling all problems related to the national park and dealing with environmental questions.

FRANCE-ANTILLES: Can you tell us yet who will replace you in Guadeloupe?

De Montaignac: Yes. It will be Francois Wencelius, an engineer currently serving in Alsace as chief of the ONF's management center in Saverne. He will arrive in Guadeloupe on 19 June, so we will have a good 10 days or so in which to make the transfer. Guadeloupe is fortunate because he is a man of real ability and also because he is a forestry engineer who has had good experience in the tropics. He spent 10 years in three tropical African countries working with the Technical Center for Tropical Forestry. In addition to having a well-rounded scientific background, he is in touch with a great number of people in that field, and this will benefit the management of Guadeloupe's forest.

FRANCE-ANTILLES: What exactly is the National Forestry Office?

De Montaignac: It is a government-owned establishment, meaning that it is not exactly a government department, but neither is it a private enterprise. It is a national government-owned establishment that replaced the Water and Forest Administration in 1965. The idea at the beginning was to replace a service that admittedly had become somewhat hidebound with an organization that would be concerned with management and one that must therefore compare its revenues with its expenditures every year. The idea is that to the extent possible, the forests must be managed in a more dynamic manner as regards investments--now that we have introduced long-term planning--and revenues, which we have tried to make a little more brisk. In the DOM's [Overseas Departments] for the past few years, the ONF has been responsible, as it is elsewhere, for managing the public forests, but it has also been responsible here for forest police duties over the past 3 or 4 years--duties handled elsewhere by the Directorate of Agriculture--and for tasks related to the national park (since 1970, the year when the General Council decided to undertake that operation).

As a result of our responsibility for forest police duties, we are attached in part to the Directorate of Agriculture, since in all matters pertaining to privately owned forests where government involvement is required (clearing land, granting subsidies, and so on), it is the ONF which, as the forest service, does the work, but it does so under the control of the departmental director of agriculture. In that area, then, there is a kind of osmosis. But in all matters pertaining to management of the public forest--that is, the forest on Basse-Terre--the ONF acts as a national government-owned establishment with its own budget and without reference to other local echelons of the Ministry

of Agriculture. It is a structure that is a little hard to understand, but it works well.

What gives the forest service its strength is its territorial organization, because it exists primarily wherever there is a forest. The entire territory of Guadeloupe is covered by 24 area chiefs, each in charge of his own territorial district, so that all of Guadeloupe is covered. There are more on Basse-Terre, because there is more forest there. The whole thing is organized under a traditional hierarchical system--with a system of delegating credits and powers so that the chief in each district is responsible for what he does.

The agreement that we have with the department [administrative subdivision] in connection with the national park dates back 9 years, and it means, of course, that we also operate in fields other than the national forests.

FRANCE-ANTILLES: Briefly, what do the ONF's activities consist of?

De Montaignac: The service's basic activities are, of course, those concerned with forest management. That means employing the ONF's credits to maintain the forest and also to carry out new work. By new work, we mean everything concerned with reforestation, either by replacing local species in certain localities with more productive and more valuable species, such as New World mahogany, or by adding to the natural forest with local natural species of high quality, such as rosewood in Cote-sous-le-Vent or mountain oleander in the Baillif or Saint-Claude hills. It also includes infrastructure projects, since forest roads must be built, and every year there is a construction program aimed at making the forest more profitable.

Along with that, but in complete harmony with it, we have concerns that are related more to the protection of nature. It is in that spirit that for the past 3 years we have been working on the project to set up the national park and the nature reserves that will be associated with it. The idea that has been pursued in this connection calls for trying to determine exactly which zones are suited to making the forest productive--meaning wood production, because at the moment, Guadeloupe depends almost entirely on imports, even though it could supply its own wood. We are also trying to determine which zones are most valuable from the biological standpoint--which ones must be maintained as natural forests and administered as such, either as parts of the national park or as nature reserves. The most difficult part of our preparations for the national park has consisted of trying to decide, on the basis of our biological, forest, and human knowledge, which zones should be set aside for production and which should be set aside to be protected. The work has also involved drawing up regulations, since the national park and the nature reserves are subject to a special set of regulations. In drawing up those regulations, we have tried to make allowance for everything that needs to be protected while also attempting to take into account the material needs of the Guadeloupe community, particularly its needs as far as wood production is concerned.

## Guadeloupe Will Soon Export Mahogany

FRANCE-ANTILLES: How are things going with the Guadeloupe forest?

De Montaignac: In Guadeloupe as in all countries that have been inhabited for a long time, the forest consists more or less of what was left over after people used the rest of the territory for their own immediate needs. Most of the forest remaining here is on the massif on Basse-Terre. We estimate that there are about 50,000 hectares, of which 30,000 are on public land and thus managed by the ONF. Guadeloupe is fortunate to have that still-sizable resource, because in comparison with all the small neighboring islands, with the possible exception of Grenada and part of Saint Vincent, especially before the volcano erupted, it has a much more abundant forest area. A major part of the Guadeloupe forest is still natural forest in which human activity in recent decades, and especially before 1940, consisted mainly of chopping down trees as individuals needed them. Despite that depletion over a great deal of its area, it can be considered that 20,000 hectares are still in a situation close to that of a natural forest. For botanists, this represents an exceptional benefit, and the forest must be managed with that in mind. That was in fact the basic objective, since most of that natural forest--about 16,000 hectares--will be part of the national park, and a few other portions will be set aside as natural botanical reserves that must not be touched.

## Big Hope: Woodworking

In addition to those stands of fine-quality natural forest, which vary in their makeup depending on altitude, there are vast areas--nearly 10,000 hectares--of regulated (that is, government-owned) forests, which for their part are either in a greater state of deterioration due to a century and a half of human activity or less lush. In those sections, unlike what is happening in the more lush forests, the ONF has been pursuing a more dynamic policy over the past 30 years or so, the objective being to build them up and plant mahogany, which has been introduced to make that part of the forest more productive. Today, therefore, Guadeloupe's forest is seen as what we hope is a harmonious association of vast sections of natural forest that are relatively rich in flora and less rich in fauna and a smaller area of less natural forest that is oriented more toward production. What is involved in those production areas is not only the introduction of fast-growing and very high-quality varieties such as mahogany, but also attempts to extend the area covered by very interesting species such as mountain oleander, red mahogany at the lower elevations, and courbaril or rosewood in Cote-sous-le-Vent. Today, therefore, Guadeloupe owns a rich forest property that is now being managed in such a way as to guarantee both the function of protection, which it has always had, and, for the future, a function of production.

FRANCE-ANTILLES: Can we therefore hope for the development of woodworking in Guadeloupe?

De Montaignac: At the moment, Guadeloupe is still more or less in the trough of the wave. Many people say that there is no wood left in Guadeloupe. And it is true that in the case of cabinetmaking wood, which grows in dry zones--

examples being pearwood or rosewood, or even courbaril--there is scarcely any left in Guadeloupe. But in the relatively wet forest zones--those on Guadeloupe's massif--there is reason to expect that the work done over the past years will make it possible in the not-too-distant future--in about 15 years--for Guadeloupe to begin producing a sizable quantity of wood, and in fact it already can. For various reasons--of a technical and psychological nature--the two sawmills in Petit-Bourg and Lamentin have not achieved their expected output, but the wood is already available. If those sawmills became operational today, Guadeloupe could be supplying its domestic market with about 9,000 cubic meters of wood--in other words, roughly one-third of its requirements. Later--toward the end of the century--the plantings that began 30 years ago will begin to produce, and Guadeloupe will then gradually start producing more than enough mahogany and other woods to become not only self-sufficient but also eventually--perhaps around the year 2020--an exporter of New World mahogany, which we feel will be all the more sought after in that the Central American countries, which exploit mahogany today, have no forest policy--they simply harvest the trees. Guadeloupe, on the other hand, will take over from them: every time a tree is cut down in a regulated forest, it is because its replacement with seedlings is assured.

We can therefore consider that as far as the species that grow in dense wet forest are concerned, Guadeloupe is on the right path. It remains to find the corrective for the dry-zone species--pearwood, courbaril, and rosewood--which are greatly needed by craftsmen. They have become rare because the departmental government does not own any property in the dry zones. It seems that all of this will gradually be corrected, either through the General Council's acquisition efforts, which have been underway for the past 6 years and under which land is being repurchased for forestering or reforestering and for protecting and managing it so as to produce cabinetmaking wood, or as a result of the land reform on Grande-Terre, which calls for returning all zones that cannot be used for agriculture to the departmental government or the communes so as to establish forest reserves. The first block of land is being acquired this year: it involves 30 or 40 hectares bordering the communes of Anse-Bertrand and Port-Louis, where dry-zone trees can grow very well. There, too, we can hope that when this policy has borne fruit--in about 50 years--the craftsmen will have access to more than enough pearwood and other valuable species.

FRANCE-ANTILLES: But is it necessary to wait so long?

De Montaignac: Many of us feel that it will not be necessary to wait that long. Our reason for thinking so is that over the past 2 or 3 years, thanks to the dynamism of the Guild Chamber and the prefecture's Department for the Promotion of Handicrafts as well as the creativity and inventiveness of individuals, woodworking has gotten off to a very amazing new start. The Wood and Forest Trade Association is trying to help in that effort, and the major project of adding a second section to the House of Wood--which is an economic unit with its workshops, furniture exhibit hall, and shed with a solar drier--will all contribute to the development of handicrafts. The question that remains is: how do we insure a good supply of wood for the craftsmen? But we must not ignore the facts, and it is reasonable to assume that for the next 10 or 15 years--before Guadeloupe mahogany is really usable for cabinetmaking--Guadeloupe

will continue to depend on imports as far as cabinetmaking wood is concerned. Wood is currently imported from French Guiana, with mahogany and sometimes even pearwood coming from the Americas. We can hope that the efforts that have been underway for several years will bear fruit, but we still have several years ahead of us in which Guadeloupe will depend on the import market for supplying its craftsmen with wood.

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CSO: 5000/2129

GUATEMALA

BRIEFS

REFORESTATION EFFORTS--Through the nation's military reservists, the Guatemalan Army is working closely with the national reforestation campaign. In the departments of Quezaltenango, Chiquimula, Retalheu and Totonicapan, the reservists have planted a total of 4,000 saplings, thereby contributing to the reforestation of areas where cutting of trees has been excessive. Also, additional observances were held in honor of Arbor Day and land was prepared for future tree planting, with encouragement to schools to join in this patriotic effort. In this manner, the Guatemalan Army is constantly working with the people, as shown in this case by the Guatemalan reservists in their efforts to protect and improve our forests. Also the Army has been encouraging military commissioners and civil authorities as well as service units to join the reforestation campaign. Tex Guatemala City DIARIO DE CENTRO AMERICA in Spanish 14 Jun 82 p 27 11989

CSO: 5000/2130

MONEY ALLOCATED TO COMBAT SEA POLLUTION

Cairo THE EGYPTIAN GAZETTE in English 16 Jun 82 p 3

[Text] EFFORTS to combat water pollution in the Mediterranean and the Red Sea will be given a push forward thanks to government interest in the problem, according to the officials in the Environment Affairs Committee.

At a meeting of the Committee yesterday chaired by the Minister of State for Cabinet Affairs, Justice Adel Abdul Bakr, the government senior official announced that LE 10 million would be allocated to enhance efforts in this sphere.

Water pollution in the area is resulting mainly from oil exploration and production operations of numerous petroleum companies in onshore and offshore sites in the Gulf of Suez, the Mediterranean and their coasts.

The Governorate of Port Said has recently complained to the Egyptian General Petroleum Corp against possible pollution of the water and beaches owing to the increase of exploration activities in the offshore area to the north of Port Said.

Accordingly the Egyptian General Petroleum Corp circulated a warning to various companies exploring in the area to observe all anti-pollution measures otherwise they would be liable to any pollution or damage resulting.

Meanwhile, the authorities are currently removing the sources of water pollution because of petroleum operations in Hurghada, an official at the Committee told newsmen yesterday.

CSO: 5000/5019

## ISRAEL

### DROUGHT LOSSES ESTIMATED

Tel Aviv HA'ARETZ in Hebrew 1 Jun 82 p 1

[Article by Mikha'el Garti: "Drought Damage--IS100 Million; More Than One-Third of the Nonirrigated Areas Damaged"]

[Text] The drought damage of the 1981-82 winter season has exceeded IS100 million. Severely damaged were 250,000 dunams of nonirrigated fields which represent about 35 percent of the total nonirrigated areas north of the drought line. In addition, the compensation to the farms which were damaged by the drought will only amount to a maximum of IS45 million because compensation is given only at the level of recognized production expenses. Wide areas of wheat estimated at about 400,000 dunams which were sown by the Bedouins south of the drought line also produced no harvest, and they are serving for pasture. These details were reported yesterday by Mr David Ariel, director of the Department of Field Crops Cultivation of the Ministry of Agriculture. Mr Ariel spoke on the occasion of a study day in memory of Dani Elbashan, of blessed memory, which was conducted yesterday at the Meteorological Service in Bet Dagan and was dedicated to a recapitulation of the 5742 (1982) rainy season.

According to the statistics presented by Mr Ariel, this year 190,000 dunams in the south of the country and 60,000 in the north of the country were damaged. The areas affected were primarily in the eastern part of 'Emeq Yizre'el, the Lower Galilee, Biqa'ot Poriyah, Yavne'el, and the southern part of the Golan Heights.

Mr Ariel reported a wheat crop of 130,000 tons, a figure which constitutes only 20 percent of Israel's wheat consumption. (This is in contrast with 210,000 tons in the previous season and 280,000 tons in the season of 2 years ago.)

An analysis of the rainy season presented by Prof David Sharon of the Hebrew University and by Ms Sara Rubin of the Meteorological Institute indicates that the rainy season was characterized by a long suspension of rain in December and January throughout Israel and by a local shortage in the Negev and in broad areas of 'Emeq Yizre'el, the Lower Galilee, and northern Samaria, areas which received only about 60 percent of the average rainfall.

### Kinneret in Good Condition

The acting director of the Meteorological Service, Mr Shmuel Yaffe, noted that despite the drought, the Kinneret which is Israel's main water reservoir is in good condition because its drainage basin this year received rainfall at a rate of 80 percent of the multi-year average, and it still has water from last year when the area received 120 percent of the multi-year average rainfall. The condition of the ground water reservoirs in the southern part of the country is satisfactory, however it is precisely in the north, in the area damaged by the drought, that there has been a worrisome drop in the water table.

5830

CSO: 5000/4712

## SAUDI ARABIA

### PROFILE OF ENVIRONMENTAL PROTECTION UNIT

London ARABIA in English No 10, Jun 82 pp 76-77

[Text]

Since protection of the environment is a major issue that affects the very quality of life (the ultimate goal of development), we, in the kingdom of Saudi Arabia, are shaping our actions with more prudent care for their environmental consequences," says Dr Abdullbar Abdullah Aal-Gain, vice-president of the newly constituted Meteorology and Environmental Protection Administration (Mepa) in Saudi Arabia.

US-trained, with a PhD in Arid Land Resource Sciences, Aal-Gain has vast experience in all aspects of the kingdom's climatically related environmental problems. He is also an active participant, representing the kingdom, in various international programmes concerned with global environment and related atmospheric studies.

Among his other positions, Aal-Gain serves as vice president of the governing council of the United Nations Environment Programme (UneP) and of the International Union for the Conservation of Nature and Natural Resources (IUCN). He also represents the kingdom as a permanent member of the World Meteorological Organisation (WMO) Technical Commission on Atmospheric Sciences, as well as the WMO Inter-governmental Panel on the Global Atmospheric Research Programme.

Aal-Gain's experience at the international and regional level has, of course, greatly helped him and his team in their work towards establishing a sound Saudi environmental programme. There is a growing awareness of the problems surrounding sound environmental control measures reflected in the fact that Mepa, operating under the ministry of defence and civil aviation, has been specifically charged with responsibility for protection of the environment in Saudi Arabia.

Among other projects, Mepa is undertaking a National Oil Spill and Hazardous Substances Pollution Contingency Plan, a study of the Legal Basis for Environment Protection and

Conservation within Islamic Sharia, a Hajj Research project and a project for Environmental Support of the Bedouins.

To meet these ends, Mepa is stepping up its training activities and expanding its operations. Computerisation for analysis of weather and pollution forecasts is being introduced and Mepa is installing the latest in telecommunications systems which will lie at the heart of its far-ranging operations.

The telecommunications centre has also been designed to function as a Regional Telecommunications Hub (RTH), working as part of the international Global Telecommunication System (GTS), for which Mepa is the main collector and transmitter of data from the region. Through the RTH system, data for the regional programmes in which Mepa is involved, will also be conveyed.

At present Mepa has 22 weather stations working throughout Saudi Arabia, mainly for aviation purposes. A number of these are now being upgraded to serve as environmental and marine meteorological stations. Another 17 automatic, fully computerised stations, to serve as air quality control centres and marine and synoptic stations are also being set up, with several more planned in the coming three years. "We are concentrating on automation, to save on manpower and enhance our accuracy," says Aal-Gain.

The idea of working on the environmental programme is proving attractive to young Saudis and the majority of Mepa's staff is recruited from the kingdom. In the past five years, over 400 persons have been trained for Mepa, both at home and overseas. In addition, the government has launched an aggressive recruitment drive, offering considerable incentives to new trainees, including a 25 per cent extra allowance on their salaries.

New trainees are already hard at work in the kingdom's extensive environment programme which includes exact atmospheric tests for air

pollution for substances such as sulphur dioxide, carbon monoxide and for the measurement of the ozone layer.

Present findings indicate that such pollution is serious enough to warrant immediate measures. To this end, Mepa has formulated a series of national environmental standards, now being put into a legal framework for promulgation. "Once these standards are promulgated, monitoring will be used to see to what extent they are being adhered to," says Aal-Gain.

On the regional level, Mepa is committed to a number of important programmes including the Kuwait Action Plan (Kap) for the Protection of the Marine Environment and Development of the Coastal Areas - a co-operative effort between Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates. As part of the plan, a Marine Emergency Mutual Aid Centre (Memac) will be established, located in Bahrain. This will be used to monitor and combat maritime pollution from oil and other substances.

A similar programme, the Protection of the Red Sea and Gulf of Aden, implemented by the Arab League Educational and Scientific Organisation (Alesco) and involving those countries bordering the Red Sea, calls for the preparation of plans to combat oil spill emergencies in the region. The Saudi-Sudanese Red Sea Commission is devoted to the protection of marine life and the coastal environment in face of modern development schemes in the area.

Perhaps one of Mepa's most important undertakings at present, and the one closest to

Saudi Arabia's heart, is the Project for Environmental Support for Bedouins. This is a pilot programme directly related to the traditional lifestyle of Saudi Arabia. According to Aal-Gain, it will add immensely to the ecological and economic rationale of pastoral nomadism, once the country's mainstay.

The scheme will use both aerial and satellite photography to identify and map grazing areas, the types of vegetation there and how they are used by animals. Scientific models will then be developed to establish the relationship between rainfall, vegetation, herd size and other parameters, in order to draw up a range management scheme for cattle grazing.

"At one time Saudi Arabia used to export meat products to its neighbouring countries," says Aal-Gain. "Now it is importing quite a lot of its needs. One of the main reasons for this is the abandonment of nomadism as a technique for the use of marginal resources and thus the production of protein and protein products. We should not lose this expertise in food production as a renewable source."

The results of this study and others in the Mepa programme should be helpful not only to the inhabitants of Saudi Arabia, but also to those of other countries in the region facing similar problems. Mepa works closely with other institutes and organisations both at home and abroad in an exchange of information and findings and in terms of training and research. This sharing of ideas reflects the kingdom's commitment towards ensuring a better living environment for all.

CSO: 5000/4713

NIGERIA

BRIEFS

SOIL EROSION, POLLUTION CONTROL--Kaduna State Government is making every effort to check and control environmental hazards in the state. This was disclosed by the state Commissioner for Health, Mr Asandu Garba Gwanyo while launching the World Environment Day recently. The commissioner disclosed that in the current plan period the Kaduna State Government intended to make provisions for land rehabilitation survey to check and control soil erosion. Similar programmes, according to the commissioner, would be initiated to check industrial pollution. Mr Asandu Garba Gwanyo said the state had drawn up an impressive programme for forest plantations and reserves, tree planting parks and gardens, and holiday resorts. The state is actively involved in the establishment of special industrial areas, estates and layouts and model villages, the commissioner asserted. Mr Asandu Garba who observed that the main causes of environmental decay was socio-economic development, especially rapid urbanisation, said good air and fresh water was already becoming part of man's diminishing resources. The commissioner appealed to voluntary organisations such as youth clubs, women organisations, religious bodies and the press to take part in the effort to make our environment clean and habitable. [Ismaila Mohammed] [Text] [Kano SUNDAY TRIUMPH in English 27 Jun 82 p 3]

CSO: 5000/5771

ZIMBABWE

SERIOUSNESS OF MATABELELAND DROUGHT DESCRIBED

Harare THE HERALD in English 3 Jul 82 p 4

[Excerpt] The Matabeleland drought was now so serious that soon people would start dying, an MP said in the Assembly yesterday.

The warning came from Mr Sikwili Moyo (ZAPU, Matabeleland South) who said it was the Government's policy for people to become self-sufficient and the peasants, using primitive means and equipment, had dug 200 wells for themselves.

But the Government should have given them modern equipment to find underground water and should now take radical steps to provide the peasants with water.

"The drought is so bad that soon people will start dying," said Mr Moyo, urging the Prime Minister and a team of ministers to visit the area to see exactly what was happening there.

Mr Moyo also strongly denied that communal farmers in the Gwanda area were resisting the Government's resettlement policy.

The peasants were merely putting forward suggestions about how they could be helped so that cattle, their "life-blood," would survive.

What they needed was grazing land they could rent for their cattle. When they talked about cattle they talked about thousands, not one or two grazing around their homes in the communal lands.

It was the Government's policy to encourage the establishment of cooperatives and it should therefore support the cattle cooperatives that had been established by the peasants.

Mr Moyo said the peasants had submitted written plans to the Government about how the resettlement lands should be used and he urged it to implement the ideas.

He asked why, in view of the fact that his constituency had been declared a national disaster area because of the drought, the Government had not done more to provide water for the peasants and their cattle.

CSO: 5000/5778

ZIMBABWE

BRIEFS

COTTON CROP HIT--A total of 92 000 tonnes of seed cotton has been delivered to the Cotton Marketing Board depots so far this season, a CMB spokesman has revealed. Of this, 58 000 tonnes has been received from large scale commercial farmers and the balance from small scale farmers, communal farmers and Arda Estates. The spokesman said that this year's intake of seed cotton was expected to be 131 000 tonnes. The overall estimated total will be about one-third down on last year's delivery of 199 000 tonnes, due mainly to the effects of the drought. "The crop is 5-6 weeks earlier this year because of the drier conditions experienced during the season. There were very little plantings in some areas due to the late arrival of planting rains. In some instances, although planting seed was purchased, no planting occurred as rainfall was too late." "The southern region, Mashonaland South and Midlands, have been affected more than other areas due to the drought. Crop opening has been extremely rapid even in areas where adequate rainfall has occurred during the season." Approximately 45 000 tonnes of cotton lint is expected to be produced for delivery to spinners in both Zimbabwe and abroad, plus 84 000 tonnes of cottonseed. A portion of the cottonseed is retained by the Cotton Marketing Board for the production of planting seed while the remainder is sold locally to stock-feeders and the commercial expressors in Harare and Bulawayo. [Text] [Harare THE HERALD in English 2 Jul 82 p 2]

CSO: 5000/5778

USSR

## SCIENTIST DISCUSSES RIVER DIVERSION, ECOLOGY

OW071307 Moscow Domestic Television Service in Russian 0830 GMT 10 Jun 82

[ "Life of Science" program devoted to the 25th anniversary of the Siberian Department of the USSR Academy of Sciences moderated by N.A. Logachev, corresponding member of the USSR Academy of Sciences and chairman of the East Siberian affiliate of the USSR Academy of Sciences]

[Excerpts] The Institute of Geography of Siberia and the Far East has in recent years mainly pursued the topic of ecology. Besides the topic of ecology, that is the problem of environmental protection. The problem of comprehensive map drawing of territories is being successfully worked out at the institute. Such comprehensive maps of the territory of Irkutskaya Oblast and the trans-Baykal region have been created at the Institute of Geography of Siberia and the Far East and presently maps of Amurskaya Oblast are being completed.

Of course, to properly develop our economy here we must know how they effect the development of the economy [as heard] and what can be expected here. First of all I would like to note that a big contribution has been made to studying the course of natural processes of typical natural systems in this region -- the geosystems, as we call them -- by establishing data collecting stations [stationary] in various areas and in characteristic natural zones. A large volume of materials has been collected which can be further used in understanding the laws of natural development in these areas for their rational use and protection of the environment.

The basic direction of the work here lies in forecasting the development of the natural environment of this region under the influence of man's economic activity. This is a large task and of course will be implemented by a whole detachment of researchers.

The second large development in which geographers are taking part is that complex of work connected with diverting part of the sources of Siberian rivers to the south into Central Asia and Kazakhstan. The main task which geographers are solving here is to reveal the consequences which this diversion will have for the Siberian regions themselves.

I would especially like to note that the elaboration of theoretical, fundamental work is closely connected with the development of applied research which also occupies a large place in the general system of our work, and this work receives a high assessment from practical workers and gives an obvious return to the national economy.

CSO: 5000/2137

USSR

## PENTAGON SPACE PROGRAM THREATENS ENVIRONMENT

LD011008 Moscow TASS in English 0832 GMT 1 Jul 82

[ "USA Preparing for Outer Space War" -- TASS headline ]

[Text] Moscow July 1 TASS -- The Pentagon's decision to announce as of September 1, 1982 near-earth outer space to be a probable theatre of military operations "totally disregards humanity interests," the Soviet weekly NEW TIMES [NOVOYE VREMYA] points out in its issue of July 2.

"While the command is being formed and readying to demand its share from the gigantic military budget of the USA, the final trials have started of the space ship 'Columbia' according to the 'Shuttle' programme, which has been completely under the Pentagon's control. The aim is to create in outer space within the next few years systems of weapons that will enable to ensure military superiority over the USSR," the journal points out.

Till 1994 a half of the cargoes for the "Shuttle" space ships will be supplied by the Pentagon, the NEW TIMES goes on to write. "But the potentialities of the National Air Space Administration no longer suit the generals. The Air Force is already building its own launching pad in California and its flight control centre in Colorado, where the outer space command will have its headquarters."

"It has been announced in the Pentagon that the establishment of the Outer Space Command will cause no considerable damage as regards environmental pollution. Apparently these calculations disregard human civilisation," the Soviet weekly stresses.

CSO: 5000/2137

GREECE

WAYS TO COMBAT POLLUTION DESCRIBED

Athens I KATHIMERINI in Greek 13-14 Jun 82 p 2

[Text] The immediate implementation of long-range measures for the definitive treatment of atmospheric pollution in the Athens area is being proposed in yesterday's announcement by the Political Office of KODISO [Party of Democratic Socialism]. With the same announcement, KODISO criticizes the government for implementing measures "which bear the stamp of improvisation and makeshift actions and whose effectiveness is not convincing to anyone, while at the same time they create very many problems, with serious economic and social consequences for the people of Athens."

The following measures are being proposed by KODISO, with the announcement stressing that their cost will not be greater than the cost generated by the present anarchy:

1. The polluting substances which are contained in the fuels must be reduced before they are delivered to the consumers. This refers to the national refinery and to the fuel market, which is controlled exclusively by the State.
2. Urban transport must be improved, with the taking of all measures necessary for the unimpeded flow of wheeled vehicles, and the electrification of transport systems must be increased.
3. Arrangements must be made for the technical checking of all vehicles, as well as of other combustion devices, at fixed regular intervals.
4. We must adopt those specifications for all types of combustion devices which are in accordance with what is internationally accepted, with a possible subsidy or financing program for their improvement or replacement.
5. The replacement of some fuels by less polluting ones (for example, coal gas, natural gas) must be pursued.
6. A step-by-step transferring of polluting industries and light manufacturing outfits--with cost accounting and, where needed, subsidizing--outside the Athens basin must be implemented, along with a gradual decongesting of the population by providing housing and a way of livelihood for the workers.

12114  
CSO: 5000/5332

GREECE

BRIEFS

KAVALA PORT POLLUTED--Kavala, 10 Jun--Some 30 to 40 tons of a toxic substance which is used to clean the casings for oil bore-holes in the Gulf of Kavala leaked out in the early morning hours into the city's port from a tank on dry land. Following the leakage, a considerable expanse of sea was covered by a viscous red-colored mass and the shores were polluted. Moreover, workers who at that time were working at locations around the port had to leave, since they could not stand the unbearable stench which arose. Likewise, divers who were working on the sea bottom in the port were compelled to abandon their work and to withdraw. Investigations are being conducted to discover how the leakage occurred. [Text] [Athens TO VIMA in Greek 11 Jun 82 p 10] 12114

PLANS TO EVACUATE KAVALA DESCRIBED--Kavala--If from inland petroleum facilities or from any other stage of the gas-pumping cycle poisonous gases ever escape into the atmosphere in significant quantities, then Kavala will be evacuated. To deal with such a possibility, the appropriate services have drawn up a special program, and their higher-ranking officers are being trained in its implementation. The above revelation was made at a session of the Kavala municipal council, which is asking that a detailed investigation be carried out on the three cases of pollution last week, that the circumstances of accidents at the petroleum facilities be explored, and that the supervision of the appropriate State services be intensified. [Text] [Athens I KATHIMERINI in Greek 17 Jun 82 p 2] 12114

KALAMATA POLLUTION--Kalamata--Unbearable conditions have been created, to the detriment of the health of the people, by the "Agricultural Industry, AE," which operates on Artemidos Street. The findings which have been made by the appropriate services are devastating, but no measures have been taken to protect the health of the 5,000 residents who are living in the area of the factory. -The kernel-oil factory of this company has been operating illegally since 10 November 1981, and its wine plant since 14 July 1979, according to a document from the Peloponnisos Industrial Review Board. -It follows from the same document that the company has not procured the requisite permit for the disposal of industrial wastes and sewage. -In its report, the Public Health Service of the Messinia Nomarchy states that "the sewer pipe for wastes has broken at a distance of roughly 150 meters south of the factory. From this point, the effluents flow out onto the surface, collect in pools along Artemidos Street, and at two spots flow down into the yards of houses, resulting in the creation of troublesome and unsanitary conditions, to the detriment of the public health." Nevertheless, the factory is operating still. Who will take an interest in the health of the people? [Text] [Athens RIZOSPASTIS in Greek 12 Jun 82 p 7] 12114

POLLUTED RIVER IN CRETE--Irakleion--This year the summer will be unbearable for the residents of the workers' settlements of "Kaminia" and "Deilina" near Irakleion, on account of the dangerous pollution of the Giofyros River (west of the city). Despite the interpellations which the KKE and other democratic parties have submitted in the Chamber of Deputies, the memoranda of the Irakleion Municipal Council, of the cultural associations, and of the residents of the western settlements, for years now the authorities have observed with indifference that the currant exporters and the other industrialists of the area have been throwing the wastes of their factories into the river without any biological purification, with the result: That the Giofyros has become the primary source of pollution for the city. Especially in the summer months, the smell is unbearable and the residents suffer from and are threatened with attack by various diseases. Certain of the measures which the authorities need to take immediately to deal with this problem are the implementation of legislation on the industrialists and exporters, and the deepening and paving with cement of the river bed. [Text] [Athens RIZOSPASTIS in Greek 17 Jun 82 p 6] 12114

POLLUTION OF PATRAIKOS GULF--Patrai--Late yesterday evening, the Court of Appeals issued its decision on the four industries which have been charged with polluting Patraikos Gulf: Found innocent were Mr Mikhalopoulos and Mr Mindzas of the Iadopoulos and the Peiraiki-Patraiki industries respectively. The remaining defendants, Maniakis (tannery), Kazandzis (Peiraiki-Patraiki), and Bosinis (VESO), received a punishment of imprisonment for 1 Year, to be converted to 1,000 drachmas per day. [Text] [Athens TA NEA in Greek 10 Jun 82 p 12] 12114

VOLOS BEACHES POLLUTED--Volos--In recent days, the polluting of Pagasitikos Gulf by industrial wastes has reached a maximum, with the result that it is no longer possible to swim at beaches near Volos, and this has given rise to numerous and vigorous protests by the residents. The New Democracy Deputy G. Sourlas made a relevant interpellation in the Chamber of Deputies, and he called for measures to be taken against the Salonica paper-pulp industry which is operating in the area of Larisa and which is diverting wastes to the Pagasitikos area via the Karla Tunnel. [Text] [Athens I KATHIMERINI in Greek 11 Jun 82 p 2] 12114

CIV: 5000/5532

NORWAY

REPORT SAYS MANY FJORDS ARE SERIOUSLY POLLUTED

Oslo AFTENPOSTEN in Norwegian 14 Jun 82 p 48

[Text] A number of Norwegian fjords and coastal areas are heavily polluted with environmental poisons and other pollutants. This will appear from the first summary report in connection with the state program for the supervision of pollution. The report, which was prepared by the State Pollution Inspectorate (SFT), will be released sometime this summer. The Grenland area along with Frier Fjord and Sauda Fjord are the areas most heavily polluted by heavy metals and other environmental poisons.

Areas close to large industrial sites are the ones most affected by environmental poisons. The report to be issued by SFT will describe the environmental conditions of 30 waterways and fjords.

The state program for pollution control concerns both air and water. Air quality is checked in selected cities and densely-populated areas. The number of waterways and fjords that are kept under special supervision has been expanded from 30 in 1980 to 50 today. It is also part of the program to check polluted air and precipitation--acid rain--that has come from far away.

AFTENPOSTEN has learned that the report will conclude that the pollution situation in Mjosa is well on the way to being under control. The pollution that caused the drinking water to smell and taste bad has been brought under control as a result of a large-scale cleanup operation. But studies show that the amounts of mercury in bodies of water are still high and have changed little in the last 10 years. This is probably because many of the mercury compounds are stored in the mud on the bottom of Mjosa and are now being released into the water again. The increase in acid precipitation and the acidification of bodies of water can be contributing factors in releasing the mercury. SFT is now considering making a separate study to clarify in more detail the reasons for the high concentration of mercury in Mjosa.

The pollution situation has also improved in Gudbrandsdalslagen. But the report will show that several water areas have not improved with respect

to pollution even though extensive cleanup measures have been carried out. Among these areas are the Halden River, Vansjø, Oyeren and Oreelven.

And in some of the fjord areas it does not appear that cleanup measures have had any tangible effects so far. Among other places, this is true of Frier Fjord in Grenland, while Sauda Fjord, on the other hand, is somewhat better than previous studies showed. Inner Oslo Fjord has not shown any improvement with regard to pollution either. But there it is mainly sewer pollution that is the biggest factor and the starting up of the new purification plant in Vest Fjord in a short time will probably lead to improvements over a period of time.



Fig. 1. Fjorder og kystområder sterkt belastet med miljøgifter. Klarende hyår: 1) ✓ Chlorinated hydrocarbons  
2) (+) Chlorine compounds from bleaching plants  
3) Metaller  
4) PAH  
5) Fluorine

#### Fjords and coastal areas strongly polluted with environmental poisons.

- Key:
- 1. Chlorinated hydrocarbons
  - 2. Chlorine compounds from bleaching plants
  - 3. Metals
  - 4. PAH [expansion unknown]
  - 5. Fluorine

It is worrying that environmental poisons affect a number of fjord areas where there are large industrial sites. Because relatively little is known about the effects of many of these pollutants, SFT feels it is important to get as good an idea as possible of the pollution levels in individual areas. Environmental poisons will be dealt with in a separate article in the report to be released by SFT. The map showing the fjords and coastal areas most affected by environmental poisons has been taken from this special article on the issue.

6578  
CSO: 5000/2133

ENVIRONMENT MINISTER DISCUSSES BILL TO EASE POLLUTION RULES

Oslo AFTENPOSTEN in Norwegian 24 Jun 82 p 3

[Article by Gunnar Christian Poulsen]

[Text] "The requirements are the same and polluters are still subject to penalties and responsible for their discharges. But the public authorities will eliminate a lot of unnecessary work." That comment on the government's proposed changes in the pollution law was made by Environmental Affairs Minister Wenche Frogner Sellaeg at the ministry's press conference in Oslo yesterday. The proposal is based on earlier nonsocialist proposals and means that it will not be necessary to seek a dispensation in order to discharge substances that do not lead to substantial damage or inconvenience.

During the Storting debate on the pollution law in January 1981, representatives of the Conservative, Center and Christian People's parties were critical with regard to the many broad powers the law gave to the administrators of the legislation.

The government's report on the changes in the law says, among other things, that "doubt can be cast on both the necessity and the extent of some of these regulations (read: powers)."

"The state and its organs will supervise compliance with the law and its provisions, as before. Companies and others who pollute must still follow the directives they receive and are under criminal liability to do so. Another new thing is that the state will also become criminally liable. But our bill means that we will not determine the solutions to be chosen by polluters in order to comply with the requirements," said the environmental affairs minister.

"This will greatly streamline the operations of the administration and many firms will be freed from unnecessary paper work."

The cabinet minister said that no criteria had been established for what would be defined as "pollution that does not lead to substantial damage or inconvenience" and that none were contemplated either.

"It is quite impossible to establish criteria for every different circumstance and situation, but the ministry has a good backlog of experience that can be used to evaluate each individual case," said Wenche Frogne Sellaeg. She pointed out that the proposal for new regulations is based on confidence in those to whom they will apply.

"Industry has made an enormous effort to reduce and eliminate the emission of pollutants, with the help of the Environmental Affairs Ministry and the state. By January 1985, most of the directives will have been complied with," the cabinet minister said.

The proposed amendments to the law would also mean that municipalities will decide for themselves how to implement renovations. Now the Environmental Affairs Ministry can enforce arrangements against the will of the local community, but in the future it will merely provide guidance.

The environmental affairs minister hoped that the countries will be able to reach total agreement at next week's Nordic conference in Stockholm on acid rain. "A unified Nordic region would be a strength," she said. "We agree on restrictions applying to all new firms that discharge pollutants and on ordering existing polluters to reduce or eliminate harmful emissions. For example, high smokestacks have proved to be a blind alley, they simply distribute the harmful effects over a larger area," said Wenche Frogne Sellaeg. She hopes that more countries will add their names to the agreement that has already been ratified by 12 countries. The agreement must be ratified by 24 countries before it can gain international recognition.

At the press conference, the environmental affairs minister also answered questions about preparedness to deal with oil pollution problems. She said Norway has a satisfactory level of preparedness in this area and that year-round drilling for oil north of the 62d parallel was therefore justified. "But we know that the dark winters, current conditions and the weather in the North can make it much more difficult to remove or limit oil spills than it is in the South," said Wenche Frogne Sellaeg, who specified that in the event of large oil spills the municipalities of the country are responsible for carrying out an action, while the state is responsible for equipment.

Today most municipalities have oil spill plans but there are still many that lack this kind of preparation for an emergency.

6578  
CSO: 5000/2133

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DATE FILMED**

August 5, 1982